

West Michigan TMC

September 2006

Serving the Grand Rapids Area Freeways



Suzette Peplinski, PE

Michigan Department of Transportation

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Control Room Coverage

Control Room Hours of Operation

Day	Time Period	Time of Day
Mondays – Thursdays	All	6:00 a.m. to 8:00 p.m.
Fridays	May through Labor Day	6:30 a.m. to 9:00 p.m.
Sundays	May through Labor Day	5:00 p.m. to 8:00 p.m.
Fridays	Labor Day through April	6:30 a.m. to 8:00 p.m.
Sundays	Labor Day through April	None
Special Events	All	As needed
Holidays	New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.	None

The following report is limited to data collected during the hours of operation for the control room and within the ITS device coverage area.

ITS Device Locations and Coverage Area



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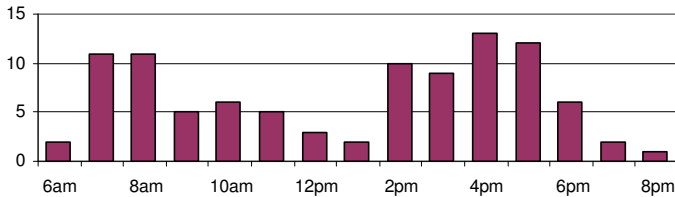
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Control Room Support Activity

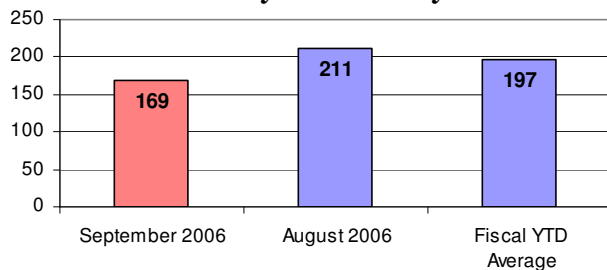
Month Total of Unplanned Incidents per Weekday Hour



Monthly High Impact Unplanned Incident Activity

Incident	Sep 2006	Aug 2006	Fiscal YTD Average
Lane Closures	11	7	9
Ramp Closures	-	-	1
Freeway Closures	-	3	2

Monthly Call History



Total Monthly Unplanned Incidents by Roadway

Freeway	Sep 2006		Aug 2006		Fiscal YTD Average	
	Total	per mi.	Total	per mi.	Total	per mi.
I-96 (4.5 mi.)*	9	2.0	8	1.8	7	1.6
I-196 (8.5 mi.)*	25	2.9	15	1.8	22	2.5
US-131 (11 mi.)*	62	5.6	86	7.8	67	6.1
Monthly Total	96	4.0	109	4.5	96	4.0

*Mileages reflect the portion of the roadway within the coverage area.

Calls by Type

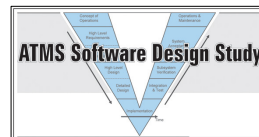
Agency	In	Out	Total
City of Grand Rapids	0	0	0
City of Wyoming	0	3	3
Grand Rapids Police Department	17	83	100
Kent County Road Commission	0	1	1
MDOT, Construction	3	2	5
MDOT, Traffic/ITS	1	0	1
MDOT, Maintenance	0	0	0
MDOT, Other	0	1	1
Media	2	1	3
Michigan State Police	1	29	30
Sheriff, Kent Co.	0	4	4
URS Corporation	8	6	14
ITS System Maintenance	1	4	5
Other	0	2	2
Month Total	33	136	169

Traffic Management Center News

The control room hours of operation for this holiday season have been modified to include coverage on the Friday following Thanksgiving (11/24/06).

The Lake Michigan camera has been without pan/tilt capabilities since the September 9th. TransCore will be replacing the camera.

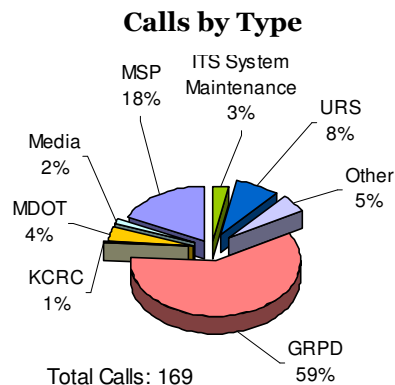
There have been intermittent communication areas with the southern DMS (36th Street, 28th Street, Hall Street). Randy is investigating the problem.



(<http://mdot-atms-study.com>)

The TMC hosted a meeting for operations stakeholders to provide input into MDOT's ATMS development process.

Several candidates were interviewed for a new part-time operator position. The new operator will be covering one shift per week.



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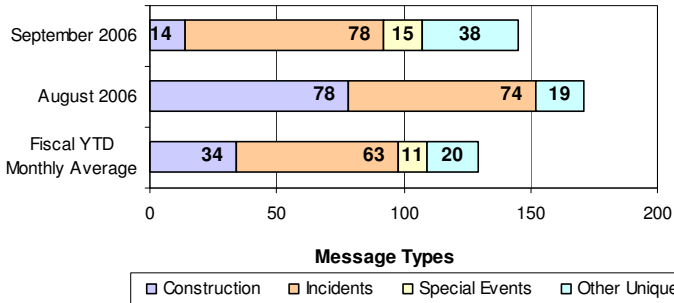


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Traveler Information Activity

- The MDOT ITS Control Room provides traffic information to freeway users via 10 dynamic message signs (DMS) positioned in key locations along the freeway system in the greater Grand Rapids area.

Unique DMS Messages by Type



Top Three Utilized DMS

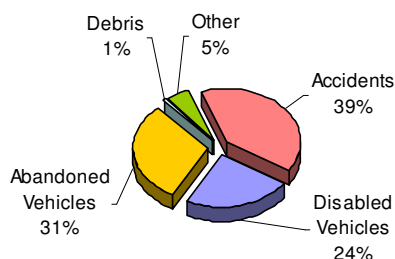
1. Northbound US-131 at 28th Street
2. Westbound I-196 at Plymouth Avenue
3. Northbound US-131 at 36th Street

Incident Communication Accuracy

[Work in Progress]

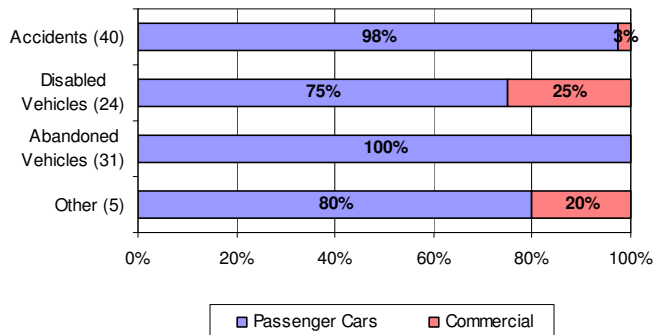
Incident Management Information

Incidents Managed by Type

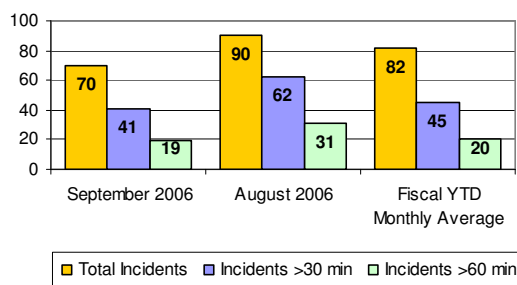


Total Incidents: 101

Vehicle Composition of Incidents

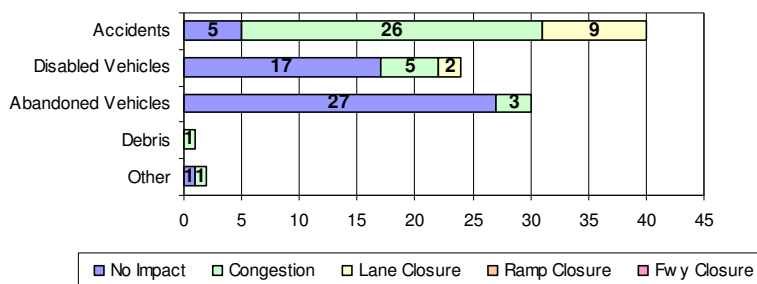


Incident Duration History*



* Incident Duration History does not include abandoned vehicles.

Traffic Impacts by Incident Type



Incident Hot Spots

- 6 accidents
- 5 accidents

- 4 disabled vehicles
- 3 disabled vehicles

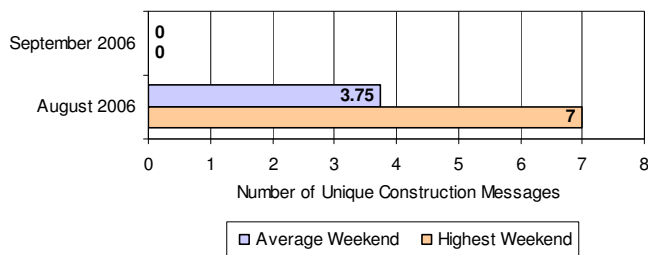
Construction Management Information

Incidents Occurring in Construction Zones

[Work in Progress]

Data Triggers to be
Implemented for October Report

Weekend* Construction DMS Message Activity



*Friday, Saturday and Sunday.

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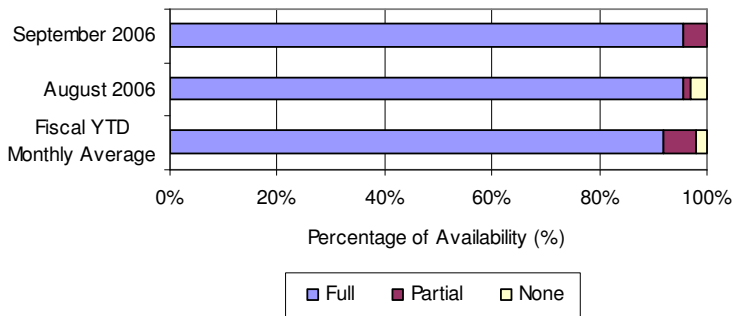
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ITS Field Infrastructure Reliability

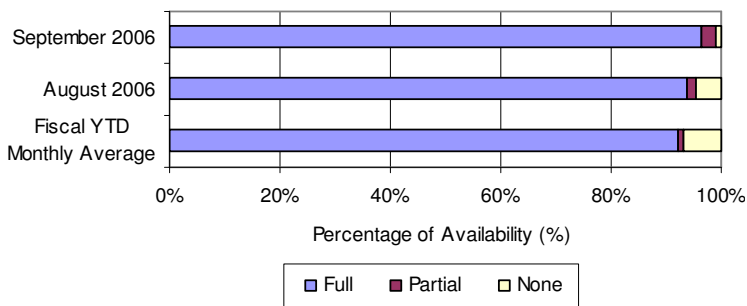
Overall Camera System Availability



Individual CCTV Camera Availability

Camera	Full	Partial	None
1 US-131 @ 28th St	100%	-	-
2 US-131 @ Franklin St	100%	-	-
3 US-131 @ Market Ave	100%	-	-
4 US-131 @ Pearl St	100%	-	-
5 US-131 @ I-196	100%	-	-
6 US-131 @ Leonard St	100%	-	-
7 US-131 @ Ann St	100%	-	-
8 US-131 @ I-96	100%	-	-
9 US-131 @ Hall St	100%	-	-
10 US-131 @ West River	100%	-	-
11 I-196 @ Chicago Dr	100%	-	-
12 I-196 @ Lake Michigan Dr	26%	71%	3%
13 I-196 @ Lane Ave	100%	-	-
14 I-196 @ College Ave	100%	-	-
15 I-196 @ Fuller Ave	100%	-	-
16 I-96 @ I-196	100%	-	-
17 I-96 @ Fulton/M-21	100%	-	-

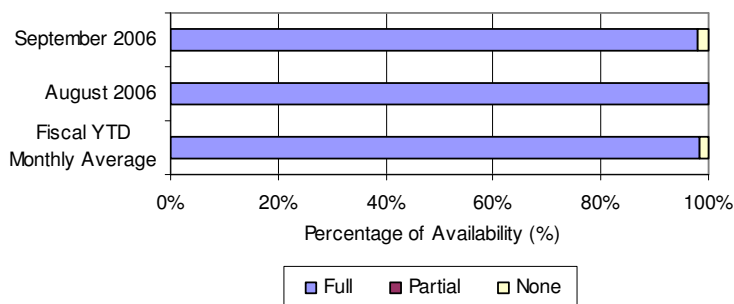
Overall DMS System Availability



Individual Dynamic Message Sign Availability

DMS	Full	Partial	None
1 WB I-96 @ Fulton/M-21	100%	-	-
2 WB I-196 @ Chicago Dr	100%	-	-
3 EB I-196 @ Plymouth	100%	-	-
4 SB US-131 @ West River	100%	-	-
5 SB US-131 @ Ann	100%	-	-
6 NB US-131 @ Leonard	100%	-	-
7 SB US-131 @ Pearl	100%	-	-
8 SB US-131 @ Hall	89%	8%	3%
9 NB US-131 @ 36th St	87%	11%	3%
10 NB US-131 @ 28th St	87%	8%	5%

Overall VSLS System Availability



Individual Variable Speed Limit Sign Availability

VSLS	Full	Partial	None
1 NB US-131 @ Market	100%	-	-
2 US-131 @ Franklin St	97%	-	3%
3 US-131 @ Market Ave	97%	-	3%
4 US-131 @ Pearl St	97%	-	3%

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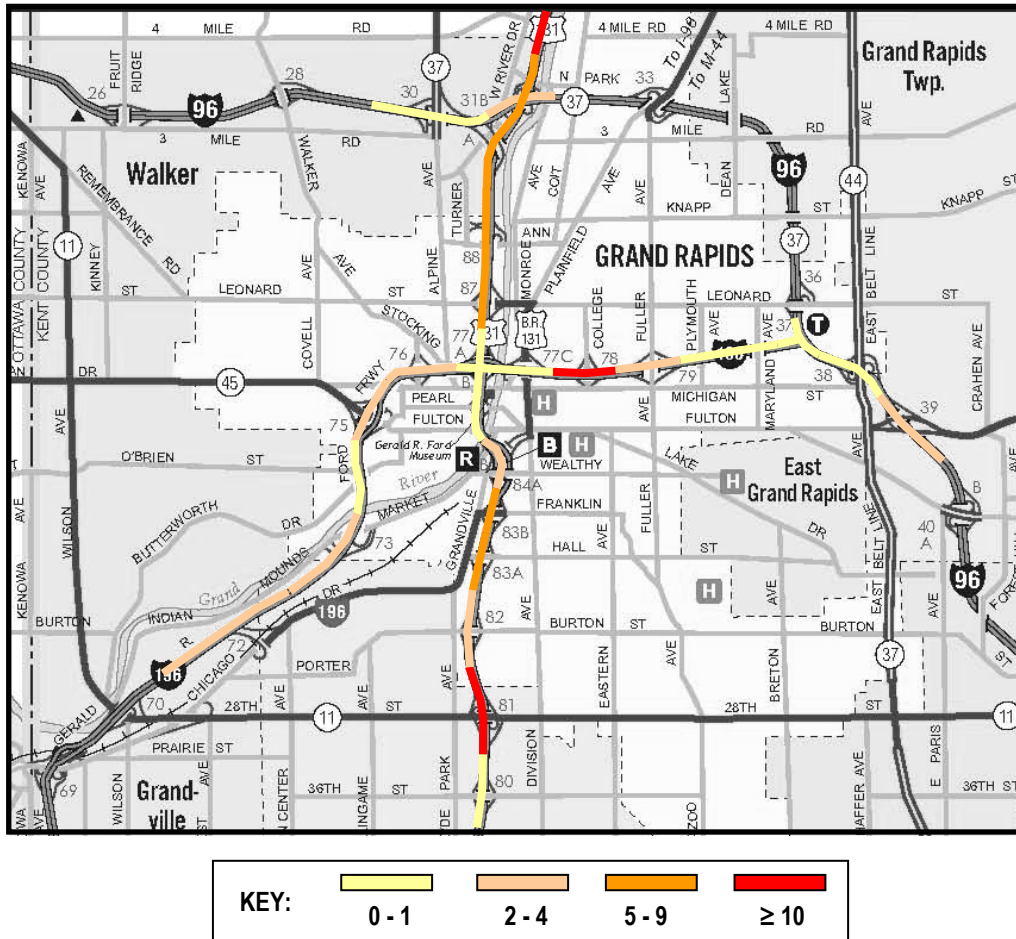
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Safety Summary

Incidents by Freeway Segment



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DATA KEY INFORMATION

Table	Description	Purpose	Data Source
Month Total of Unplanned Incidents per Weekday Hour	Displays the total unplanned incidents for 1-hour increments over a 24-hour period.	Provides a snapshot view of variability of incidents by time of day.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Monthly High Impact Unplanned Incident Activity	Displays the number of major unplanned incidents for the current month, previous month and fiscal year-to-date monthly average.	Provides a snapshot view of the major incidents that affect the roadway and freeway interchanges along with historical data.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Total Monthly Unplanned Incidents by Roadway	Displays the total unplanned incidents by freeway and the density of incidents based on freeway coverage.	Provides a snapshot view of the number of incidents per freeway per month.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Monthly Call History	Displays the number of telephone calls (incoming and outgoing) for the Control Room Operators for the current month, previous month and fiscal year-to-date monthly average.	Provides a snapshot view of the control room workload in a historical context.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Calls by Type (Table)	Displays the number and types of call activity for the Control Room operators, separating incoming and outgoing calls.	Provides a snapshot view of the Control Room call distribution and any apparent trends with the call volume or type.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Calls by Type (Pie Chart)	Displays the percentage distribution of call activity for the Control Room operators.	Provides a snapshot view of the Control Room call distribution and any apparent trends with the call volume or type.	<u>Control Room Activity Log</u> Manually entered information by the operator.

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DATA KEY INFORMATION

Table	Description	Purpose	Data Source
Unique DMS Messages by Type	Displays the total number of unique DMS messages by type that occurred during the month.	Provides a snapshot view of the level of effort and need related to DMS messages.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Top Three Utilized DMS	Displays the top 3 DMS in terms of the number of unique messages displayed for the month.	Provides a snapshot view of the "most active" DMS for traveler information, which may indicate areas where additional DMS or other forms of traveler information may be necessary.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Incident Communication Accuracy	N/A	N/A	N/A

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Incidents Managed by Type	Displays the distribution of incident types.	Provides a snapshot view of the composition of incidents.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Vehicle Composition of Incidents	Displays the number of incidents that involved commercial vehicles compared to passenger cars for each incident type.	Provides a snapshot view of the incidents involving commercial vehicles.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Incident Duration History	Displays the total number of incidents compared with the number of incidents with durations exceeding 30 minutes and 60 minutes. (current month, previous month and fiscal year-to-date monthly average)	Provides a snapshot view of the duration of incidents managed by the control room.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Traffic Impacts by Incident Type	Displays traffic impact distributions by incident type.	Provides a snapshot view of the typical traffic impacts for each incident type.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Incident Hot Spots	Displays the most frequent locations for accidents and disabled vehicles.	Provides a snapshot view of where operators should concentrate their attention.	<u>Control Room Activity Log</u> Manually entered information by the operator.

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Table	Description	Purpose	Data Source
Incidents Occurring in Construction Zones	N/A	N/A	N/A
Weekend Construction DMS Message Activity	Displays the average and maximum number of unique construction messages posted during a full (Friday-Sunday) weekend in the current and previous months.	Provide an snapshot view of the quantity of messaging occurring during the weekend.	<u>Control Room Activity Log</u> Manually entered information by the operator.

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Table	Description	Purpose	Data Source
Overall Camera System Availability	Displays the percentage of CCTV camera availability for the current month, previous month and fiscal year-to-date monthly average.	Provides a snapshot view of system availability in relation to historical data.	<u>Daily Shift Report</u> Manually entered information by the operator.
Individual CCTV Camera Availability	Displays the percentage of time each individual CCTV camera is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<u>Daily Shift Report</u> Manually entered information by the operator.
Overall DMS System Availability	Displays the percentage of Dynamic Message Sign availability for the current month, previous month and fiscal year-to-date monthly average.	Provides a snapshot view of system availability in relation to historical data.	<u>Daily Shift Report</u> Manually entered information by the operator.
Individual Dynamic Message Sign Availability	Displays the percentage of time each individual Dynamic Message Sign is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<u>Daily Shift Report</u> Manually entered information by the operator.
Overall VSLS System Availability	Displays the percentage of Variable Speed Limit Sign availability for the current month, previous month and fiscal year-to-date monthly average.	Provides a snapshot view of system availability in relation to historical data.	<u>Daily Shift Report</u> Manually entered information by the operator.
Individual Variable Speed Limit Sign Availability	Displays the percentage of time each individual Variable Speed Limit Sign is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<u>Daily Shift Report</u> Manually entered information by the operator.
Incidents by Freeway Segment	Displays incident density per segment of roadway within the ITS device coverage. Red indicates a freeway with the highest incident density. Dark orange, light orange and light yellow represent decreasing levels of density, respectively.	Provides a graphic representation of incident density to assist in choosing locations for future ITS devices.	<u>Daily Shift Report</u> Manually entered information by the operator.